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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/658,472

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EXAMINER

NGUYEN, PHILLIP

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 09/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/658,472

Applicant(s)

MIYAIRI ET AL.

Examiner

Phillip Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>7/7/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1 and 19 have been considered but are moot in view of the new ground(s) of rejection.

Allowance notice of claims 2, 17-18, and 20 have now been withdrawn with respect to newly found prior art.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 2 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Nagaishi et al (US Patent No. 5544182). Nagaishi discloses a laser apparatus comprising a laser oscillator 2; a light amount adjuster 2 for adjusting an energy of an incident laser beam by changing a transmittance thereof; a driver 4 for controlling the transmittance of the light amount adjuster 2; an entrance side optical system 71 for sampling a part of the laser beam that enters the light amount adjuster 2; a first electric signal generator 31 for generating a first electric signal that contains as a data an energy fluctuation of the laser beam that enters the light amount adjuster

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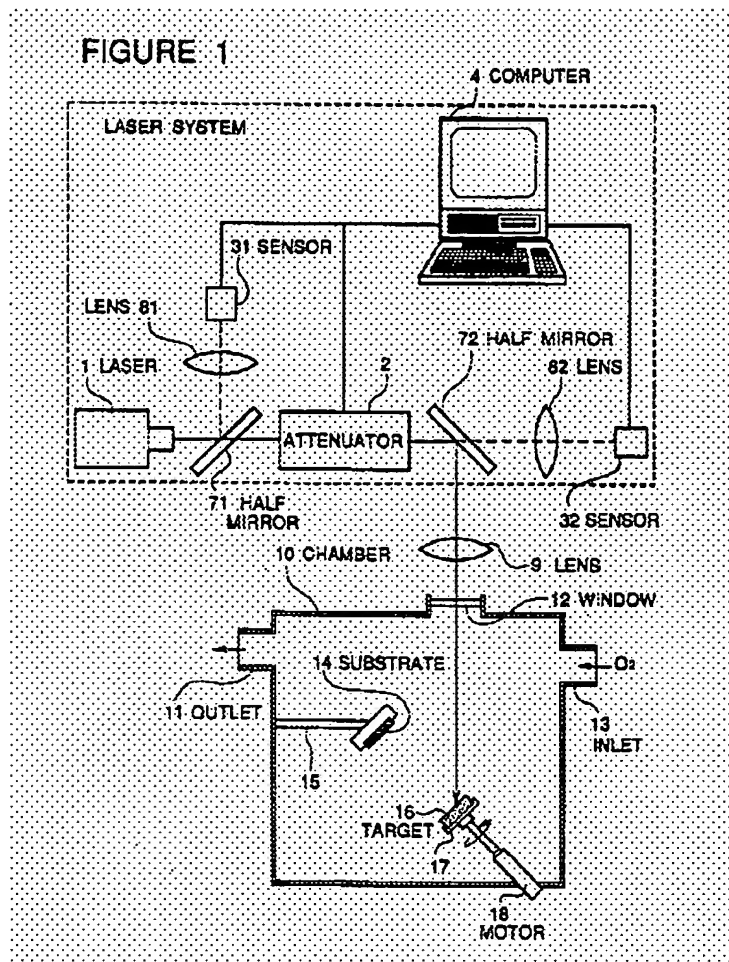
using a part of the laser beam sampled by the entrance side optical system 71; an exit side optical system 72 for sampling a part of a laser beam of which the energy has been adjusted by the light amount adjuster; a second electric signal generator 32 for generating a second electric signal that contains as a data an energy fluctuation of the laser beam of which the energy has been adjusted by the light amount adjuster using the part of the laser beam sampled by the exit side optical system; and a signal processing unit 4 for subjecting the first electric signal and the second electric signal to a signal processing to grasp a state of the energy fluctuation of the laser beam that enters the light amount adjuster as well as a state of the energy fluctuation of the laser beam whose energy has been adjusted by the light amount adjuster. It is noted that Nagaishi discloses the computer 4 which controls the light amount adjuster (attenuator) so therefore it is inherent to have an attenuator driver.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagaishi et al (US Patent No. 5544182).



With respect to claims 1, Nagaishi discloses in Fig. 1 a laser apparatus comprising a laser oscillator 1; an electric signal generator 71 sampling a part of a laser beam emitted from the laser oscillator; an electric signal generator 31 for generating an electric signal that contains an energy fluctuation of the laser beam as a data using the part of the laser beam sampled; a light amount adjuster 2 for adjusting an energy of the laser beam emitted from the laser oscillator by changing a transmittance thereof; and a signal processing unit 4 for subjecting the electric signal to a signal processing except for explicitly teaching to calculate a frequency, an amplitude, and a phase of the energy fluctuation of the laser beam. However, it is believed that the computer is capable of calculating a frequency, amplitude, and a phase of the energy fluctuation of the laser beam by

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obtaining the energy fluctuation from the electric energies receiving from sensors 31 and 32 with software. Therefore it is obvious to one skilled in the art to use particular software to calculate the frequency, amplitude, and phase based as disclosed by Nagaishi (col. 3, lines 8-20).

With respect to claims 17-18, Nagaishi discloses the claimed invention except for the signal processing unit controls the driver such that a phase of the transmittance changes in antiphase to the phase of energy fluctuation of the beam that enter the light amount adjuster with an amplitude of the transmittance capable of reducing the amplitude of the energy fluctuation of the laser beam emitted from the laser oscillator, the control being made based on the phase difference between a phase of a signal that is in synchronization with an oscillation of the laser beam emitted from the laser oscillator and the phase calculated, on the energy ratio of the sampled laser beam to the laser beam emitted from the laser oscillator and on the frequency and the amplitude calculated. As discussed above, it would have been obvious to the one having ordinary skill in the art at the time the invention was made to provide a software to be processed by the computer 4 to perform such a calculation as claimed.

With respect to claims 19-20, as discussed above in claims 1-2, Nagaishi discloses the claimed invention. It is believed that the computer would include a driver for the attenuator 2.

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Communication Information

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phillip Nguyen whose telephone number is 571-272-1947. The examiner can normally be reached on 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MINSUN HARVEY, can be reached on 571-272-1835. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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MINSUN OH HARVEY
PRIMARY EXAMINER